U.S. Application No.: 10/542,724

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application:

## LISTING OF CLAIMS:

1. (currently amended): A compound represented by formula (I)

T
$$(CH_2)_n-Y-G-D$$
 $(I)$ 
 $OH$ 

wherein \_\_\_\_\_ is a single bond or a double bond,

is  $\alpha\text{-configuration}$  ,  $\beta\text{-configuration}$  or a voluntary mixture of  $\alpha\text{-configuration}$  and  $\beta\text{-configuration}$ 

D is -COOR<sup>1</sup> or tetrazoryl,

R<sup>1</sup> is hydrogen or C1-4 alkyl,

G is ringA or C1-4 alkylene,

ringA is

$$\frac{(R^2)_p}{s} \qquad \frac{N}{s} \qquad \text{or} \qquad \frac{N}{s}$$

R<sup>2</sup> is a halogen atom, C1-4 alkyl or C1-4 alkoxy,

p is 0 or an integer of 1-4,

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when p is 2 or more, plural R<sup>2</sup>'s are the same or different,

Y is a single bond or -S-,

T is oxygen or sulfur,

X is -CH<sub>2</sub>-, -O- or -S-,

ringB is C3-7 cycloalkyl optionally substituted,

$$(R^3)_q \qquad (R^3)_q \qquad (R^3$$

wherein R<sup>3</sup> is (1) a halogen atom, (2) C1-4 alkyl optionally substituted with 1-5 of halogen atom(s), (3) C1-4 alkoxy optionally substituted with 1-5 of halogen atom(s), (4) C1-4 alkyl substituted with C1-4 alkoxy, (5) phenyl or (6) 3- to 15- membered mono-, bi- or triheterocyclic aryl containing 1 to 4 hetero atom(s) selected from the group consisting of oxygen, nitrogen and sulfur atom(s) which may be partially or fully saturated, and (5) phenyl or (6) heterocyclic aryl in R<sup>3</sup> is optionally substituted with 1-3 of (a) halogen atom(s), (b) C1-4 alkyl, (c) C1-4 alkoxy and/or (d) nitro,

q is 0 or an integer of 1-5,
when q is 2 or more, plural R³'s are the same or different, and
n is an integer of 1-4,
a salt thereof, a solvate thereof, a cyclodextrin clathrate thereof, or a prodrug thereof.

2. (currently amended): The compound according to claim 1, which is selected from the group consisting of:

- (1) 4-[(2-{(4S)-4-[(1E,3S)-4-(3-ethylphenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl]ethyl)sulfanyl]butanoic acid,
- (2) 4-[(2-{(4S)-4-[(1E,3S)-3-hydroxy-4-phenylbut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid,
- (3) 4-{[2-((4S)-4-{(1E,3S)-4-[4-fuloro-3 (trifuloromethyl)phenyl]-3 hydroxybut-1-enyl}-2-oxo-1,3-thiazolidine-3-yl)ethyl]sulfanyl}butanoic acid\_4-{[2-((4S)-4-{(1E,3S)-4-[4-fluoro-3-(trifluoromethyl)phenyl]-3-hydroxybut-1-enyl}-2-oxo-1,3-thiazolidine-3-yl)ethyl]sulfanyl}butanoic acid,
- (4) 4-[(2-{(4S) 4-[(1E,3S) 4-(3,5-difulorophenyl)-3-hydroxybut-1-enyl] 2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid\_4-[(2-{(4S)-4-[(1E,3S)-4-(3,5-difluorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid,
- (5) 4-[(2-{(4S)-4-[(1E,3S)-3-hydroxy-4-(3-propylphenyl)but-1-enyl]-2-oxo-1,3-thiazolidine-3-yl]ethyl)sulfanyl]butanoic acid,
- (6) 4-[(2-{(4S)-4-[(1E,3S)-4-(3-ethyl-4-fulorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid\_4-[(2-{(4S)-4-[(1E,3S)-4-(3-ethyl-4-fulorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid,
- (7) 4-[(2-{(4S)-4-[(1E,3S)-4-(3,4-difulorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl)butanoic acid\_4-[(2-{(4S)-4-[(1E,3S)-4-(3,4-difluorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl)butanoic acid.

- (8) 4 {[2-((4S)-4-{(1E,3S)-3-hydroxy-4-[3-(trifuloromethyl)phenyl]but-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]but-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]but-noic acid,
- (9) 4-[2-{(4S) 4-[(1E,3S) 4-(4-fuloro-3-methylphenyl) 3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid\_4-[2-{(4S)-4-[(1E,3S)-4-(4-fluoro-3-methylphenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid,
- (10) 4-[(2-{(4S) 4-[(1E,3S) 4-(3-fulorophenyl) 3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid\_4-[(2-{(4S)-4-[(1E,3S)-4-(3-fluorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid,
- (11) 4-[(2-{(4S) 4-[(1E,3S)-4-(3-chloro-4-fulorophenyl) 3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid\_4-[(2-{(4S)-4-[(1E,3S)-4-(3-chloro-4-fluorophenyl)-3-hydroxybut-1-enyl]-2-oxo-1,3-thiazolidine-3-yl}ethyl)sulfanyl]butanoic acid,
- (12) 4-{[2-((4S)-4-{(1E,3S)-3-hydroxy-4-[3-(methoxymethyl)phenyl]but-1-enyl}-2-oxo-1,3-thiazolidine-3-yl)ethyl]sulfanyl}butanoic acid,
- (13) 7-{(2R)-2-[(1E,3S)-4-(4-fulorophenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid\_7-{(2R)-2-[(1E,3S)-4-(4-fluorophenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,
- (14) 7-{(2R)-2-[(1E,3S)-4-(3,5-difulorophenyl)-3-hydroxybut-1-enyl]-5thioxopyrrolidine-1-yl}heptanoic acid\_7-{(2R)-2-[(1E,3S)-4-(3,5-difluorophenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,

- (15) 7-((2R) 2-{(1E,3S) 4-[4-fuloro 3-(trifuloromethyl)phenyl]-3-hydroxybut 1-enyl}-5-thioxopyrrolidine 1-yl)heptanoic acid 7-((2R)-2-{(1E,3S)-4-[4-fluoro-3-(trifluoromethyl)phenyl]-3-hydroxybut-1-enyl}-5-thioxopyrrolidine-1-yl)heptanoic acid,
- (16) 7-{(2R)-2-[(1E,3S)-4 (4-fuloro-3-methylphenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid\_7-{(2R)-2-[(1E,3S)-4-(4-fluoro-3-methylphenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,
- (17) 7-{(2R) 2-[(1E,3S) 4-(3-ethyl-4-fulorophenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid\_7-{(2R)-2-[(1E,3S)-4-(3-ethyl-4-fluorophenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,
- (18) 7-((2R) 2-{(1E,3S) -3 -hydroxy -4-[3 (trifuloromethyl)phenyl]but-1-enyl} -5-thioxopyrrolidine -1 -yl)heptanoic acid\_7-((2R)-2-{(1E,3S)-3-hydroxy-4-[3-(trifluoromethyl)phenyl]but-1-enyl}-5-thioxopyrrolidine-1-yl)heptanoic acid,
- (19) 7-{(2R) 2-[(1E,3S) 4-(3-fulorophenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid 7-{(2R)-2-[(1E,3S)-4-(3-fluorophenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,
- (20) 7-{(2R)-2-[(1E,3S)-3-hydroxy-4-phenylbut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,
- (21) 7-{(2R)-2-[(1E,3S)-4-(3,4-difulorophenyl)-3-hydoroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid\_7-{(2R)-2-[(1E,3S)-4-(3,4-difluorophenyl)-3-hydoroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,

- (22) 7-{(2R)-2-[(1E,3S)-4-(3-chloro-4-fulorophenyl)-3-hydroxybut-1-enyl]-5-thioxiopyrrolidine-1-yl}heptanoic acid 7-{(2R)-2-[(1E,3S)-4-(3-chloro-4-fluorophenyl)-3-hydroxybut-1-enyl]-5-thioxiopyrrolidine-1-yl}heptanoic acid,
- (23) 7-{(2R)-2-[(1E,3S)-4-(3-ethylphenyl)-3-hydroxybut-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid,
- 7-{(2R)-2-[(1E,3S)-3-hydroxy-4-(3-propylphenyl)but-1-enyl]-5-thioxopyrrolidine-1-yl}heptanoic acid.
- 3. (currently amended): The compound according to claim 1, which is represented by formula (I-1):

T 
$$(CH_2)_n - S - G^1 - COOR^1$$
  
X  $14$   $(I-1)$   
OH

wherein G<sup>1</sup> is ringA<sup>1</sup> or C1-4 alkylene,

ringA1 is

wherein left-pointing arrow represents binding to S, and right-pointing arrow represents binding to COOR<sup>1</sup>,

ringB<sup>1</sup> is C3-7 cycloalkyl,

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ringB<sup>1</sup> may be substituted with a halogen atom, C1-4 alkyl, phenyl, methoxymethyl, trifluoromethyl-trifluoromethyl and/or-trifluoromethoxy,

other symbols have the same meanings as described in claim 1, and wherein when T is oxygen, X is -CH<sub>2</sub>-, and when n is an integer of 2-4,  $G^1$  is ringA<sup>1</sup>.

- 4. (currently amended): The compound according to claim 3, which is selected from the group consisting of:
- (1) (15α,13E)-9-oxo-15-hydroxy-16-(3-phenylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (2) (15α,13E)-9-oxo-15-hydroxy-16-(3-ethylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (3) (15α,13E)-9-oxo-15-hydroxy-16-(3-chloro-4-fulorophenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3-chloro-4-fluorophenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (4) (15α,13E)-9-oxo-15-hydroxy-16-(naphthalene-2-yl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,

- (5) (15α,13E)-9 oxo-15-hydroxy-16 (3-trifuloromethoxyphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethoxyphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (6) (15α,13E) 9 oxo 15 hydroxy 16 (4 fuloro 3 phenylphenyl) 17,18,19,20 tetranol 5 thia 8 aza 10 oxaprost 13 enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-phenylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (7) (15α,13E) 9-oxo-15-hydroxy-16 (4-fuloro-3-methylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-methylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (8) (15α,13E) 9 oxo-15-hydroxy-16-(3,5-difulorophenyl) 17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3,5-difluorophenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (9) (15α,13E) 9 oxo 15 hydroxy 16 (3 fulorophenyl) 17,18,19,20 tetranol 5 thia 8 aza 10 oxaprost 13 enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3-fluorophenyl)-17,18,19,20 tetranol 5 thia 8 aza-10-oxaprost 13 enoic acid,
- (10) (15α,13E)-9 oxo-15-hydroxy-16 (4-fuloro-3-trifuloromethylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-trifluoromethylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (11) (15α,13E) 9 oxo 15 hydroxy 16 (3 trifuloromethylphenyl) 17,18,19,20 tetranol 5 thia 8 aza 10 oxaprost 13 enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,

- (12) (15α,13E) 9-oxo-15-hydroxy-16 (3,4-difulorophenyl) 17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3,4-difluorophenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (13)  $(15\alpha,13E)$ -9-oxo-15-hydroxy-16-phenyl-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (14)  $(15\alpha,13E)$ -9-oxo-15-hydroxy-16-(3-propylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (15) (15α,13E)-9-oxo-15-hydroxy-16-(3-methoxymethylphenyl)-17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (16) (15α,13E) 9 oxo 15 hydroxy 16 (3-ethyl-4-fulorophenyl) 17,18,19,20 tetranol 5thia-8-aza 10 oxaprost 13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3-ethyl-4-fluorophenyl)
  17,18,19,20-tetranol-5-thia-8-aza-10-oxaprost-13-enoic acid,
- (17) (15α,13E)-9-oxo-15-hydroxy-16-phenyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,
- (18) (15α,13E)-9-oxo-15-hydroxy-16-(3-methylphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,
- (19) (15α,13E) 9 oxo 15 hydroxy-16 (4-fulorophenyl) 5 (4-carboxythiazol-2-yl) 1,2,3,4,17,18,19,20 octanol 5 thia 8 aza 10 oxaprost 13 ene (15α,13E)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,

- (20) (15α,13E)-9-oxo-15-hydroxy-16-(naphthalene-2-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,
- (21) (15α,13E)-9-oxo-15-hydroxy-16-(3-phenylphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-aza-10-oxaprost-13-ene,
- (22) (15α,13E)-9-oxo-15-hydroxy-16-(3-phenylphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (23) (15α,13E)-9-oxo-15-hydroxy-16-(naphthalene-2-yl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (24) (15α,13E) 9 oxo 15 hydroxy 16 (4-fuloro 3-phenylphenyl) 5 (5 carboxythiophene-2-yl) 1,2,3,4,17,18,19,20 octanol 5 thia 8 azaprost 13 ene (15α,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-phenylphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (25) (15α,13E)-9-oxo-15-hydroxy-16-(3-ethylphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (26) (15α,13E)-9-oxo-15-hydroxy-16-(3-methylphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (27) (15α,13E) 9 oxo 15 hydroxy-16 (3-trifuloromethoxyphenyl) 5 (5-carboxythiophene 2 yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene (15α,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethoxyphenyl)-5-(5-carboxythiophene-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,

- (28) (15α,13E)-9-oxo-15-hydroxy-16 (4-fuloro-3-phenylphenyl)-5 (4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene (15α,13E)-9-oxo-15-hydroxy-16-(4-fluoro-3-phenylphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (29) (15α,13E)-9-oxo-15-hydroxy-16-(3-ethylphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (30) (15α,13E)-9-oxo-15-hydroxy-16-(naphthalene-2-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (31) (15α,13E) 9 oxo-15-hydroxy-16 (3-trifuloromethoxyphenyl)-5 (4-earboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene (15α,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethoxyphenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (32) (15α,13E) 9-oxo-15-hydroxy-16-(3-chloro-4-fulorophenyl) 5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene (15α,13E)-9-oxo-15-hydroxy-16-(3-chloro-4-fluorophenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (33) (15α,13E)-9-oxo-15-hydroxy-16-cyclopropyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (34) (15α,13E)-9-oxo-15-hydroxy-16-cyclohexyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,

- (35) (15α,13E) 9-oxo-15-hydroxy-16-(4-fulorophenyl)-5-(5-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene (15α,13E)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-5-(5-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (36) (15α,13E)-9-oxo-15-hydroxy-16-cyclobutyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (37) (15α,13E)-9-oxo-15-hydroxy-16-(4-chlorophenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (38) (15α,13E)-9-oxo-15-hydroxy-16-cycloheptyl-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (39) (15α,13E)-9-oxo-15-hydroxy-16-(indane-2-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (40) (15α,13E)-9-oxo-15-hydroxy-16-(tetrahydropyran-4-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (41) (15α,13E)-9-oxo-15-hydroxy-16-(7-methylnaphthalene-2-yl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (42) (15α,13E) 9-oxo-15-hydroxy-16 (4-fulorophenyl)-17,18,19,20-tetranol-5,10-dithia-8-azaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-17,18,19,20-tetranol-5,10-dithia-8-azaprost-13-enoic acid,
- (43) (15α,13E) 9 oxo-15 hydroxy-16 (4 fulorophenyl) 17,18,19,20 tetranol 6 thia-8-azaprost-13 enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-17,18,19,20-tetranol-6-thia-8-azaprost-13-enoic acid,

- (44) (15α,13E)-9-oxo-15-hydroxy-16-(3-methylphenyl)-17,18,19,20-tetranol-6-thia-8-azaprost-13-enoic acid, and
- (45) (15α,13E)-9-thioxo-15-hydroxy-16-(4-fulorophenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid (15α,13E)-9-thioxo-15-hydroxy-16-(4-fluorophenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid.
- 5. (currently amended): The compound according to claim 1, which is represented by formula (I-2):

O 
$$(CH_2)_2$$
  $-G^2$   $-D$   $(I-2)$   $13$   $OH$   $(R^4)_r$ 

wherein G<sup>2</sup> is

$$(R^2)_p$$
  $s$   $N$  , or  $s$ 

wherein left-pointing arrow represents binding to  $-(CH_2)_2$ -, and right-pointing arrow represents binding to D,

R<sup>4</sup> is (1) a halogen atom, (2) C1-4 alkyl, (3) C1-4 alkoxy, (4) C1-4 alkyl optionally substituted with 1-5 of halogen atom(s), (5) C1-4 alkoxy optionally substituted with 1-5 of halogen atom(s), (6) phenyl or (7) 3- to 15- membered mono-, bi- or tri-heterocyclic aryl

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containing 1 to 4 hetero atom(s) selected from the group consisting of oxygen, nitrogen and sulfur atom(s) which may be partially or fully saturated, and (6) phenyl or (7) heterocyclic in the R<sup>4</sup> may be substituted with 1-3 of (a) a halogen atom(s), (b) C1-4 alkyl, (c) C1-4 alkoxy and/or (d) nitro,

r is an integer 1 to 5, and other symbols have the same meanings as described in claim 1.

- 6. (currently amended): The compound according to claim 5, which is selected from the group consisting of:
- (1) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3,5-dimethylphenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (2) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(benzothiazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (3) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(4-fulorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(4-fluorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (4) (15α,13E)-9-oxo-15-hydroxy-16-(3-(5-methylbenzothiazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (5) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(5-methylbenzoxazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,

- (6) (15α,13E)-9-oxo-15-hydroxy-16-(3-(6-methylbenzoxazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (7) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(6-methylbenzoxazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (8) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(4-methylbenzothiazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (9) (15α,13E)-9-oxo-15-hydroxy-16-(3-(4-methylbenzothiazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (10) (15α,13E) 1,6 (2-fuloro 1,4-interphenylene) 9-oxo-15-hydroxy-16-(3-methylphenyl) 2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid (15α,13E)-1,6-(2-fluoro-1,4-interphenylene) 9-oxo-15-hydroxy-16-(3-methylphenyl) 2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (11) (15α,13E)-1,6-(3-methyl-1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methylphenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (12) (15α,13E)-9-oxo-15-hydroxy-16-(3-(5,7-dimethylbenzoxazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (13) (15α,13E)-9-oxo-15-hydroxy-16-(3-(5-chlorobenzothiazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (14) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-(5-chlorobenzothiazol-2-yl)phenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,

- (15)  $(15\alpha)$ -9-oxo-15-hydroxy-16-(3-(2,4-dimethylphenyl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (16)  $(15\alpha,13E)$ -9-oxo-15-hydroxy-16-(3-(3,4-dimethylphenyl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (17) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3,4-difulorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3,4-difluorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (18)  $(15\alpha,13E)$ -1,6-(2-methyl-1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methylphenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (19) (15α,13E)-9-oxo-15-hydroxy-16-(3-(5-chlorobenzoxazol-2-yl)phenyl)-5-(4-carboxythiazol-2-yl)-1,2,3,4,17,18,19,20-octanol-5-thia-8-azaprost-13-ene,
- (20) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methyl-4-fulorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methyl-4-fluorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (21) (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-chloro-4-fulorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid (15α,13E)-1,6-(1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-chloro-4-fluorophenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,
- (22) (15α,13E)-1,6-(3-methoxy-1,4-interphenylene)-9-oxo-15-hydroxy-16-(3-methylphenyl)-2,3,4,5,17,18,19,20-octanol-8-azaprost-13-enoic acid,

- (23) (15α,13E)-9-oxo-15-hydroxy-16-(3-trifuloromethoxyphenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3-trifluoromethoxyphenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid,
- (24)  $(15\alpha,13E)$  9 oxo 15 hydroxy 16 (3,5 difulorophenyl) 17,18,19,20 tetranol-5 thia 8-azaprost 13-enoic acid  $(15\alpha,13E)$ -9-oxo-15-hydroxy-16-(3,5-difluorophenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid,
- (25)  $(15\alpha,13E)$ -9-oxo-15-hydroxy-16-(3-(phenyl)phenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid,
- (26) (15α,13E)-9-oxo-15-hydroxy-16-(3-(4-fulorophenyl)phenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3-(4-fluorophenyl)phenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid, and
- (27) (15α,13E) 9 oxo-15-hydroxy-16 (3-phenyl-4-fulorophenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid (15α,13E)-9-oxo-15-hydroxy-16-(3-phenyl-4-fluorophenyl)-17,18,19,20-tetranol-5-thia-8-azaprost-13-enoic acid.
- 7. (previously presented): A pharmaceutical composition comprising the compound represented by formula (I) according to claim 1, a salt thereof, a solvate thereof, a cyclodextrin clathlate thereof, or a prodrug thereof, and a pharmaceutically acceptable carrier.
  - 8. (canceled).

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9. (withdrawn): A method for preventing and/or treating EP4-mediated disease, which comprises administrating to a mammal an effective amount of the compound represented by formula (I) according to claim 1, a salt thereof, a solvate thereof or a cyclodextrin clathrate thereof, or a prodrug thereof.

- 10. (canceled).
- 11. (new): The compound according to claim 1, wherein n is 1 or 2.